

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-025218**Date Inspected:** 16-Jul-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder**Summary of Items Observed:**

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of weld joints and the Complete Joint Penetration (CJP). The welding was performed utilizing the Flux Cored Arc Welding (FCAW) Process.

A). OBG E11/E12

The QAI observed the CJP welding of the side plate field splices identified as Weld Number (WN): 11E-12E-C. The welding was performed by Wai Kitlai ID-2953 and Hua Qiang Hwang ID-2930 utilizing the FCAW-G process as per the Welding Procedure Specification (WPS) ABF-WPS-D15-1040B, Rev. 0. The WPS was also utilized by the QC Inspector Steve Jensen as a reference during monitoring the welding and verifying the welding parameters. The in process welding and inspection appeared to comply with the contract specifications.

B). QC Ultrasonic Testing

The QAI observed the preliminary Ultrasonic Testing (UT) of the shear plate identified as WN: N-043and S-043. The testing was performed by the QC technician Steve McConnell utilizing a G.E./Krautkramer USM 35X. The examination of the ESW was conducted utilizing UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 and the applicable contract documents. The QC technician performed the required longitudinal wave technique, utilizing a 25.4 mm diameter transducer, to perform the examination for base metal soundness and the shear wave technique for the examination of weld soundness which was performed utilizing a 16 mm x 19 mm rectangular transducer.

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The testing of the shear plates was not completed during this shift.

The QAI also observed the UT of the "A" deck field splice identified as 11W-12W-A. The testing was performed by the QC technician Jesse Cayabyab utilizing a G.E./Krautkramer USM 35X. The examination of the field splice was conducted utilizing UT Procedure identified as SE-UT-D1.5-CT-100 Rev.4 and the applicable contract documents. The QC technician performed the required longitudinal wave technique, utilizing a 25.4 mm diameter transducer, to perform the examination for base metal soundness and the shear wave technique for the examination of weld soundness which was performed utilizing a 16 mm x 19 mm rectangular transducer. The testing was not completed during this shift.

C). QA Verification

The QAI performed a random Ultrasonic Test (UT) and Magnetic Particle Test (MPT) of various Complete Joint Penetration (CJP) groove welds. A total area of approximately 10% was tested to verify the weld and the testing performed by QC meet the requirements of the contract documents. For additional information and locations please see the UT report, TL-6027, and the MPT report, TL-6028, generated on this date.

This QA Inspector also performed a daily review and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

QA Summary

The welding was performed in the vertical (3G) position with work elevated at an approximate 22 degree incline utilizing the E71T-1 consumable. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter to measure the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs below illustrate some of the work observed during this scheduled work date.



Summary of Conversations:

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There were general conversations with Quality Control Lead Inspector, Bonifacio Daquinag, Jr., at the start of the shift regarding the location of welding, inspection and N.D.E. testing personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
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Reviewed By:	Levell,Bill	QA Reviewer
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